



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1045; Directorate Identifier 2011-NE-32-AD]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Honeywell International Inc. models TFE731-4, -4R, -5, -5R, -5AR, and -5BR series turbofan engines. This proposed AD was prompted by a report of a rim/web separation of a first stage low-pressure turbine (LPT1) rotor assembly. This proposed AD would require replacing affected LPT1 rotor assemblies with LPT1 rotor assemblies eligible for installation. We are proposing this AD to prevent uncontained disk separation, leading to fuel tank penetration, fire, personal injury, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Honeywell Engines and Systems Technical Publications and Distribution, M/S 2101-201, P.O. Box 52170, Phoenix, AZ 85072-2170, phone: 602-365-2493 (General Aviation), 602-365-5535 (Commercial Aviation), fax: 602-365-5577 (General Aviation and Commercial Aviation). You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; e-mail: joseph.costa@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2011-1045; Directorate Identifier 2011-NE-32-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received a report of a rim/web separation on an LPT1 rotor disk, part number (P/N) 3075446-2, in a TFE731-5BR engine. The crack propagated in sustained peak strain low-cycle-fatigue, and accumulated 762 cycles-in-service (CIS) before failure. The current published life limit for this part is 10,000 CIS. The most probable cause for this separation was due to LPT1 blade walking. This condition, if not corrected, could result in an uncontained disk separation, fuel tank penetration, fire, personal injury, and damage to the airplane.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require replacing affected LPT1 rotor assemblies with improved design LPT1 rotor assemblies that are eligible for installation.

Costs of Compliance

We estimate that this proposed AD would affect 1,550 engines installed on airplanes of U.S. registry. We also estimate that it would take about 1 work-hour per engine to perform the proposed actions at next access and 165 work-hours per

unscheduled engine disassembly, and that the average labor rate is \$85 per work-hour. Replacement parts would cost about \$175,000 per engine. Based on these figures, we estimate the total cost of the proposed AD to U.S. operators to be \$35,195,488 per year.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Honeywell International Inc. (formerly AlliedSignal Inc., formerly Garret Turbine Engine Company): Docket No. FAA-2011-1045; Directorate Identifier 2011-NE-32-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to Honeywell International Inc. model TFE731-5 series engines, with a first stage low-pressure turbine (LPT1) rotor assembly, part number (P/N) 3075184-2, 3075184-3, or 3075184-4, installed.

(2) This AD also applies to Honeywell International Inc. models TFE731-5AR and -5BR series engines, with a first stage LPT1 rotor assembly, P/N 3075447-1, 3075447-2, 3075447-4, 3075713-1, 3075713-2, 3075713-3, or 3074748-5, installed.

(3) This AD also applies to Honeywell International Inc. models TFE731-4, -4R, -5AR, -5BR, and -5R series turbofan engines, with an LPT1 rotor assembly, P/N 3074748-4, 3074748-5, 3075447-1, 3075447-2, 3075447-4, 3075713-1, 3075713-2, or 3075713-3, installed.

(d) Unsafe Condition

This AD was prompted by a report of a rim/web separation of an LPT1 rotor assembly. We are issuing this AD to prevent uncontained disk separation, leading to fuel tank penetration, fire, personal injury, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(f) Engines Installed in Dassault-Aviation Falcon 20 and Construcciones Aeronauticas, S.A. (CASA) 101 Airplanes:

(1) Remove the LPT1 rotor assembly at the next access to the LPT1 rotor assembly or at the next major periodic inspection, not to exceed 2,600 hours-in-service since last major periodic inspection, or 8 years after the effective date of this AD, whichever occurs first.

(2) Install an LPT1 rotor assembly that is eligible for installation.

(g) Engines Not Installed in Dassault-Aviation Falcon 20 or CASA 101 Airplanes:

(1) Remove the LPT1 rotor assembly at the next core zone inspection, not to exceed 5,100 hours-in-service since last core zone inspection, or at the next time the LPT1 rotor disc is removed for cause, or 8 years after the effective date of this AD, whichever occurs first.

(2) Install an LPT1 rotor assembly that is eligible for installation.

(h) Definitions

(1) For the purpose of this AD, “next access” is when the low-pressure tie rod is unstretched.

(2) For the purpose of this AD, an LPT1 rotor assembly “eligible for installation” is an LPT1 rotor assembly not having a P/N listed in this AD.

(i) Installation Prohibition

After the effective date of this AD, if the rotor assembly must be replaced as specified in paragraph (f)(1) or (g)(1) of this AD, do not install any LPT1 rotor assembly listed by P/N in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, into any engine.

(j) Alternative Methods of Compliance (AMOCs)

The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures in 14 CFR 39.19 to request an AMOC.

(k) Related Information:

(1) For more information about this AD, contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; e-mail: joseph.costa@faa.gov.

(2) Honeywell International Inc. Service Bulletin (SB) No. TFE731-72-3768, SB No. TFE731-72-3769, and SB No. TFE731-72-3770, pertain to the subject of this AD. Contact Honeywell Engines and Systems Technical Publications and Distribution, M/S 2101-201, P.O. Box 52170, Phoenix, AZ 85072-2170, phone: 602-365-2493 (General Aviation), 602-365-5535 (Commercial Aviation), fax: 602-365-5577 (General Aviation and Commercial Aviation), for a copy of this service information.

(3) You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on February 3, 2012.

Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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